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Sequence Listing was accepted.

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Reviewer: Saleem, Syed (ASRC)

Timestamp: [year=2011; month=8; day=2; hr=9; min=40; sec=13; ms=350; ]

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Application No: 10576757

Version No: 7.0

**Input Set:****Output Set:****Started:** 2011-07-25 18:52:42.137**Finished:** 2011-07-25 18:52:43.409**Elapsed:** 0 hr(s) 0 min(s) 1 sec(s) 272 ms**Total Warnings:** 30**Total Errors:** 0**No. of SeqIDs Defined:** 30**Actual SeqID Count:** 30

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Error code

Error Description

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# SEQUENCE LISTING

<110> Winter Sederoff, Heike  
Huber, Steven C  
Larabell, Carolyn A

<120> SYNTHETIC PEPTIDES THAT CAUSE F-ACTIN BUNDLING AND BLOCK ACTIN  
DEPOLYMERIZATION

<130> JIB-1571

<140> 10576757

<141> 2011-07-25

<150> US 60/513,275

<151> 2003-10-20

<160> 30

<170> PatentIn version 3.5

<210> 1

<211> 15

<212> PRT

<213> Artificial

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<223> synthetic consensus active Zea mays Sucrose Synthase (SuSy)  
peptide

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<223> synthetic peptide derived from Zea mays SuSyl protein 367-381

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<212> PRT

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1 5 10 15

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<211> 15

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<223> synthetic peptide derived from Drosophila melanogaster Actin 2  
protein and Homo sapiens beta and gamma Actin proteins

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1 5 10 15

<210> 6

<211> 15

<212> PRT

<213> Artificial

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<223> synthetic peptide derived from Drosophila melanogaster Actin 3,  
5, and 6 proteins and Homo sapiens alpha Actin protein

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Glu His Gly Ile Ile Thr Asn Trp Asp Asp Met Glu Lys Ile Trp  
1 5 10 15

<210> 7

<211> 15

<212> PRT

<213> Artificial

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<223> synthetic peptide derived from Drosophila melanogaster ARP1

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<210> 8

<211> 15

<212> PRT

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<223> synthetic peptide derived from Drosophila melanogaster ARP2

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Glu Asn Gly Val Val Arg Asn Trp Asp Asp Met Cys His Val Trp  
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<210> 9

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<212> PRT

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<223> synthetic SS1 inactive control peptide

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Gly Asp Arg Val Leu Ser Arg Leu His Ser Val Arg Glu Arg Ile Gly  
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Lys

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<211> 18

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<223> SS2 active peptide based on Zea mays SuSy 377-392

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Lys Lys

<210> 11  
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<220>  
<223> SS11 inactive synthetic peptide

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<223> SS15 less active synthetic peptide

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<222> (13)..(13)  
<223> replaced Tryptophan residue with Alanine

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<212> PRT  
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<223> SS16 less active synthetic peptide corresponding to short middle  
portion of SS12 synthetic peptide

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<223> NR11 inactive synthetic peptide

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Ser Lys Lys

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<223> SP26 inactive synthetic peptide

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<223> Small block of SS12 sequence required for less active synthetic  
peptide

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Trp Ile Ser Arg Phe Glu Val Trp



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<210> 18  
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<223> SP3 inactive synthetic peptide

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Arg Arg Ile Ser Ser Val Glu Asp Lys Lys  
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<223> synthetic peptide of Drosophila melanogaster Actin protein  
consensus sequence

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His Thr Phe Tyr  
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<220>  
<223> synthetic peptide derived from Homo sapiens ARP1 protein

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<223> Core minimum block of SS12 sequence required for less active  
synthetic peptide

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<223> SS synthetic peptide B

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Trp Ile Ser Arg Phe Glu Val Trp Pro Tyr Leu Lys Lys  
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<210> 24

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<223> SS synthetic peptide C

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Tyr Leu Lys Lys  
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<210> 25

<211> 20

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<223> X= Val or Leu or Ile

<220>

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<222> (6)..(6)

<223> X= Arg or Thr or Lys

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<222> (7)..(7)

<223> X= Lys, Asn, Asp

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<222> (9)..(9)

<223> X= Ile or Asp or Asn

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<222> (10)..(10)

<223> X= Ser or Asp

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<223> X= Arg or Met

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<222> (13)..(13)

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<222> (14)..(14)

<223> X= Ile, Leu, or Val

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<223> X= His or none

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Glu Xaa Gly Ile Xaa Xaa Xaa Trp Xaa Xaa Xaa Xaa Xaa Trp Xaa  
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Xaa Xaa Xaa Xaa  
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<210> 26  
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<223> Motif for a synthetic peptide which causes actin bundling and  
inhbits actin depolymerization

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<221> VARIANT  
<222> (2)..(2)  
<223> X = any amino acid

<220>  
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<222> (4)..(4)  
<223> X = Ile or Val

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<221> VARIANT  
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<223> X = any amino acid

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<222> (9)..(14)

<223> X = any amino acid

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Glu Xaa Gly Xaa Xaa Xaa Xaa Trp Xaa Xaa Xaa Xaa Xaa Trp  
1 5 10 15

<210> 27

<211> 15

<212> PRT

<213> Artificial sequence

<220>

<223> Motif for a synthetic peptide that causes actin bundling and  
inhibits actin depolymerization

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<221> VARIANT

<222> (2)..(2)

<223> X= Lys, Arg, or His

<220>

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<222> (5)..(5)

<223> X= Ala, Val, Leu, Ile, Phe, Trp, Pro, or Met

<220>

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<222> (7)..(7)

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<223> X= any amino acid

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<221> VARIANT

<222> (14)..(14)

<223> X= Ala, Val, Leu, Ile, Phe, Trp, Pro, or Met

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Glu Xaa Gly Ile Xaa Xaa Xaa Trp Xaa Xaa Xaa Xaa Xaa Trp  
1 5 10 15

<210> 28  
<211> 16  
<212> PRT  
<213> Artificial Sequence

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<223> Formula (I) for active synthetic peptides

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<223> X = Ile, Val, or Leu

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<221> VARIANT  
<222> (4)..(4)  
<223> X = Arg, Lys, Asn, or Thr

<220>  
<221> VARIANT  
<222> (5)..(5)  
<223> X = Arg, Lys, Asn, or Asp

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<221> VARIANT  
<222> (7)..(7)  
<223> X = Ile, Asp, Asn, or Glu

<220>  
<221> VARIANT  
<222> (8)..(8)  
<223> X = Ser, or Asp

<220>  
<221> VARIANT  
<222> (9)..(9)  
<223> X = Arg, Met, or Ala

<220>  
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<222> (10)..(10)  
<223> X = Phe, or Glu

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<221> VARIANT  
<222> (11)..(11)  
<223> X =Asp, Glu, Lys, Arg, or His

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<223> X =Val, or Ile

<220>

<221> VARIANT  
<222> (14)..(14)  
<223> X =Pro, or His

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<222> (15)..(15)  
<223> X =Tyr, or His

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<221> VARIANT  
<222> (16)..(16)  
<223> X =Leu, or Thr

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Gly Ile Xaa Xaa Xaa Trp Xaa Xaa Xaa Xaa Xaa Xaa Trp Xaa Xaa Xaa  
1 5 10 15

<210> 29  
<211> 13  
<212> PRT  
<213> Artificial Sequence

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<223> Formula (II) for synthetic active peptides

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<223> X = Ala, Val, Leu, Ile, Phe, Trp, Pro, or Met

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<221> VARIANT  
<222> (4)..(4)  
<223> X = Lys, Arg, or His

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<221> VARIANT  
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<223> X = any amino acid

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<223> X = any amino acid

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<222> (12)..(12)  
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<213> Artificial sequence

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<223> SS2 and SS12 subsequence necessary for peptide activity

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Gly Ile Val Arg Trp Lys Ile

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